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A History of the Demolition and Reconstruction of the Illinois Old ~~SS~~ate Capitol. Rededicated 1968.









# history of the Demolition and Reconstruction of the Illinois Old State Capitol.

Rededicated during Illinois Sesquicentennial Year 1968



Illinois State Journal



Illinois State Register

SPRINGFIELD, ILLINOIS



# Foreword

## Reprint Of An Editorial Published In Our Old Capitol Rededication Edition Dec. 3, 1968

TODAY IS the climax of the Illinois Sesquicentennial Year.

It takes place in the most fitting location and circumstances and will be an event of national significance.

The dedication of the Old State Capitol is a uniquely appropriate capstone to this yearlong observance of the 150th anniversary of Illinois' admission to the Federal Union. It was on this date, December 3, 1818, that President James Monroe signed the act of admission.

As symbolic as the date is the setting for its remembrance. For the dedication of the Old Capitol recalls not only for the people of Illinois, but for Americans everywhere the inspiration of Abraham Lincoln and the life he gave for his country.

His "House Divided" address, delivered in this building, will rank forever as one of the great speeches of history. History records, too, that it was here as a young state representative that Lincoln began the career that was to have its own climax in his election to the presidency.

It was here that he returned in death, his body to lie in state for the last time in the surroundings he knew and loved so well. The mystic spirit of Abraham Lincoln seemed to linger in the Old Courthouse, as most Spring-

field people knew it and we believe this will still be true in the restored Old Capitol. Visitors for years to come will still somehow sense that in this place greatness once walked.

But the dedication today is not only the honoring of a great past. It is a bridge and rededication to the future. Illinois through its progress has paid its own special tribute to Lincoln.

Illinois after 150 years of statehood still looks eagerly to the future. Broader and brighter vistas lie before us.

Still a giant in agriculture, Illinois has become one of the most productive of the industrial states and leads all others in the manufacture of steel. The development of the Great Lakes Seaway has made of Chicago one of the world's largest ports.

Perhaps, most important of all, a sequence of year long publications, television and radio programs, competitions and other events have reminded Illinoisians and their neighbors across America that this is indeed a magnificent place in which to live.

With today's programs Illinoisians close the books on 150 years of progress, and rededicate themselves to the challenge of preserving and enriching this great heritage for generations to come.

### NOTE . . .

*All Material Appearing In This Brochure Was Produced By The  
Editorial Staffs Of The Illinois State Journal & Illinois State Register*



"Stairways of the type Lincoln climbed to House chambers have been recreated in restored Old Capitol."

## Two Presidents Once Walked Capitol Halls

The Old State Capitol soon will echo to the sounds of a throng of new visitors, but long ago its halls and chambers heard the footsteps of history.

In the two-story Greek Revival structure, famous Illinois governors, legislators and judges served their own and the people's interests; and President Lincoln and Grant rose from humble duties to assume eventually the leadership of our country.

February 24, 1837 was a cold day for the state legislature that had gathered in Vandalia to study a \$10,000,000 Internal Improvements bill and a measure to relocate the state capital.

The Long Nine, a group of Whigs from Sangamon County who averaged six feet in height, had been active the night before securing the necessary votes to have the capital moved to Springfield. Led by Abraham Lincoln, the nine Whigs cornered key objectors and explained that Sangamon support for railroads slated for their towns might disappear suddenly unless Springfield got the capital.

The House passed the measure by 46 to 37, and later a combined session of the House and Senate made the move official. Charges of "bargain and corruption" were made, but it was all over and Springfield residents put on a jubilee.

During the next two decades, the young Whig legislator Abraham Lincoln would become intimately connected with the history of the Statehouse he had secured for the town of Springfield.

He was placed on a committee to probe the "excessive" costs of the Capitol, which upon completion in 1853 totalled \$260,000. Lincoln served his last term as a Representative from Sangamon in the new Capitol in the winter of 1840-41.

On Nov. 4, 1842 Lincoln had slightly less official business in the Statehouse. Recorded on the clerk's book that day was this marriage entry:

2788—Abraham Lincoln to Mary Todd—Charles Dresser, M.G. (Minister of God).

After a term as a national Representative in Washington, Lincoln returned to Springfield in 1848. To support his ever-growing family, Lincoln returned to the capital to practice law. He tried more than 200 cases in the Supreme Court chambers, prepared cases in the Law Library and borrowed books from the State Library.

In 1854 Lincoln re-entered politics by speaking out in the Hall of Representatives against the Kansas-Nebraska Act as its author Stephen Douglas watched from the clerk's platform.

Four years later at a Republican Convention in the Statehouse, Lincoln was chosen to run against Douglas for the U.S. Senate. In accepting, Lincoln delivered one of his most famous speeches. He said:

(Continued Inside Back Cover)



# Last Trial



The last Circuit Court trial in the Old State Capitol ended July 22, 1965 when Judge William Chamberlain, right, directed the jury to return a verdict in favor of Buffalo farmer Wayne Theobald whose cow fell on his hired hand, Harry R. Davis.

Chamberlain ruled Davis had failed to show negligence on Theobald's part. With the end of the trial came the end of many acoustical and storage problems which had plagued the court's history in the Old Capitol.



# County Purchased Old Capitol For Only \$200,000

Sangamon County government occupied the Old State Capitol for 90 years, from January 1876 when the state officers moved out and the county officials moved in until August, 1966, when the county moved into its present building. The county paid \$200,000 for the Old Capitol in 1869 and rented it to the state until the new capitol was completed.

The former courthouse at the southeast corner of 6th and Washington Streets was torn down and the ground subdivided into business lots. The old structure had served approximately 30 years.

The Old Capitol met the county's needs for about 20 years but in 1897 it became apparent more space and fireproof storage facilities were needed. A committee recommended in September 1898 that the county remodel and fireproof the Old Capitol rather than building a new building. Funds were obtained through a \$100,000 bond issue and Springfield architects Samuel Hanes and S. A. Bullard were hired to supervise the work.

Hanes recommended a third story be added by lifting the entire building and inserting a new first floor. The roof and cupola had become fire hazards. The architects recommended they be replaced with metal and tile structures.

The partition walls and floors were removed before the building was raised leaving only the outer walls and the two bearing walls running north to south through the building at the ends of the porticos. Part of the west bearing wall was removed to make a wider courtroom where the House of Representatives once had been.

Contrary to popular belief, the old courtroom was not the same room used by the House although it was in the same area as the House had been. Not even the woodwork or gallery from the Old Capitol was used in the courtroom. The area was wider from east to west and shorter from north to south.

The building was raised by placing steel I-beams under the structure. It was lifted 11 feet in 12 days using screw jacks at the rate of a quarter of a turn at each signal from the foreman.

A new first story of Indiana blue Bedford limestone was inserted. The rebuilt interior was completely different than the old interior, greatly complicating the recent restoration project. Ground level entrances were added at the east and west, the moat was filled and an all-metal higher cupola was built. The raising of the building cost \$27,500. The new roof and dome cost \$12,000. The total cost of the remodeling was about \$175,000.

Part of the upper story of the building was used as Grand Army of the Republic Hall until later years when it was converted into offices for the assessors and the Veterans Assistance Commission, an election office and a delinquent tax office. The Circuit Court room gallery took up some of the space. Other areas were used for storage. An old newspaper account also indicates a dormitory once was there.

But the storage problem was not over. The Springfield Plan Commission later made a study of the additional space needed by the county and concluded 50 per cent more space was needed.

Important records had to be stored in an unfinished basement and other areas of the building where space allowed. The growing importance of records having to do with property titles and births for example, illustrates the importance of the need for more space.

Another Circuit Court room was needed and the juvenile department needed offices. The acoustics, particularly in the Circuit Court, were defeating.

While the county was talking about the need for more space, the state was talking about the desirability of converting the Old Capitol into a shrine.

The General Assembly in 1945 under Gov. Dwight H. Green appropriated \$600,000 for acquisition of the courthouse from the county and \$668,000 for restoring it, including elimination of the first floor.

The program collapsed, however, when Sangamon County voters turned down a bond issue proposal for \$1.5 million to pay for a new courthouse.

The issue was revised in the 1959 General Assembly after the County Board of Supervisors agreed to sell the building for \$975,000. But the House Appropriations Committee killed the bill for the purchase.

The county in 1961 was threatening to demolish the courthouse and sell the land to provide money to build a new courthouse when the state's bill to purchase the structure finally passed the legislature and was signed. The bill was sponsored by Sen. George Drach and was pushed through the House by Reps. George Coutrakon, Allen T. Lucas and G. William Horsley, who for many years portrayed Lincoln in "Abe Lincoln in Illinois."

Gov. Otto Kerner signed the bill Aug. 14, 1961. The appropriation included \$975,000 for the purchase and \$40,000 for engineering studies for the restoration.

The title was transferred June 29, 1962. Gov. Kerner met with Robert Watson, the chairman of the county Board of Supervisors; John Hendricks, chairman of the board's special courthouse committee; State's Atty. Raymond Terrell and County Clerk Joseph Thoman to transfer the deed, deliver the check and to receive the first rent check. The county rented the Old Capitol from the state until the new County Building was completed. The rent was paid from the interest earned by investing the \$975,000 purchase money.

The last court session in the Old Capitol was held Aug. 7, 1965, senior Circuit Judge Clem Smith presiding. Veteran members of the bar who spoke during the 20-minute ceremony included S. Phil Hutchison, Edward Pree Sr., Hugh Graham, Montgomery Winning, Logan Giffin, Judge DeWitt S. Crow and Appellate Judge James Craven. Brightly colored balloons left over from an election campaign were scattered about the county and family divisions of the court.



## Crushed To Earth . . .

Dismantling the building was the first phase in the enormous project of reconstructing the Old State Capitol.

The plan of the local architectural firm of Ferry and Henderson, presented to the State of Illinois in 1964, called for removing the exterior walls from the Old Capitol site and reassembling them there later. This permitted the integration of modern utility systems and the addition of the subsurface garage and library, while still preserving the historic stonework.

According to Earl W. Henderson Jr., partner in the firm in charge of the project, their solution was influenced by several factors. The building's first floor, added in 1899 to add interior space, had to be removed. Lowering the building, as it was raised, by means of jacks, would have been expensive and would have prevented the addition of the underground facilities.

Another alternative for restoring the building to its original appearance was to cover the base of the building with 11 feet of earth, but it also failed to provide

for the necessary integration of utilities and the underground additions.

Modern utilities like plumbing, heating, air conditioning and electrical systems will, of course, be an addition to the original building Lincoln knew. The first Capitol had stoves to keep the rooms warm in winter and doorkeepers who were instructed to regulate temperatures by lowering and raising windows.

With hundreds of thousands of tourists coming through the shrine, especially in the summer, Henderson noted, the building must have comfortable conditions which the modern systems will provide.

The parking facilities, too, will accommodate tourists expected to tour the shrine. Without the extra spaces conveniently located under the building, the downtown streets of Springfield might soon become choked with out-of-town automobiles.

When the building actually was disassembled, only the two stories between the added first story and the roof were to be salvaged, according to August Wisnosky, field architect on the project. The cupola had been added





## . . . It Rose Again

after the building was raised and replaced the original. Dismantling contractors were told to tear up the roof and remove the cupola, but to handle the stonework down to the first story with great care. Each stone was looped with a web belt, lifted by a giant crane and placed on a flatbed truck. The stones ranged in weight from 500 pounds to seven tons.

Wisnosky said each stone was carefully coded and marked, according to its position in the wall, with a prefix, denoting placement, and a number. Of the 3,300 stones which were moved, he said, not one was lost.

After the dismantling of the old building, the next step was the excavation and dewatering of the site. Workmen dug down 44 feet into the earth to remove sand pits and ground water, leaving the middle of the square looking like an open mine.

Following the preparation of the grounds, the sub-

surface facilities were added. Above them a concrete skeleton with a roof was constructed, ready to take on the historic stonework.

According to architect Wisnosky, the reassembling contractor was literally given a "kit" telling him "how to put a Capitol together by number." Keyed drawings indicated exactly where each stone was to be placed.

Some of the stones were cracked and badly chipped or weathered. Where a stone was structurally unsound, it was replaced with a new one from Mankato, Minn., similar to the original in texture and color. But some cracked stones — those to be replaced as non-supportive face stones — were simply glued together and put back.

With the stones reassembled on the Capitol site, the large task of adding the interior could begin. The "skin" of the Lincoln shrine was ready; now only the "bones" had to be replaced.

## Architects Successfully Met Big Challenge



Old Capitol architects Wallace Henderson, left, and Donald Ferry found themselves immersed in a research project that involved sifting through huge quantities of material ranging from entries in ledgers and bills for materials, to personal letters and minutes of committee meetings—anything which contained references to the Old Capitol Building.



August P. Wisnosky was the field project architect for the Old State Capitol Building. His task was to coordinate nine prime contractors and hundreds of people.



# Men With Vision Made Capitol Plan A Reality

A "living, teaching, experience-filled building," and not a "dirty old museum," or a "big old stone quarry."

If there was one thing most everyone connected with the restoration of the Old State Capitol were agreed upon, it was this.

It appears the architects achieved this goal, but the supreme test will be when the first tourists go through the Capitol. If they emerge feeling as though they have experienced something they will never forget, the project will be totally successful.

"We have attempted to create the surprises and events of space that turn people on," one of the architects said.

The effect was not an easy one to achieve.

Had the original architect's plans been available the challenge wouldn't have been quite so great. But they had been destroyed in a fire in the 1930's.

So before Donald Ferry and Earl Wallace Henderson Jr. could even begin to solve the problem of making the building and unforgettable experience, they had to figure out what the building was like in 1858 when Lincoln made his "House Divided" Speech.

Why 1858? For two reasons. One was the speech which got Abraham Lincoln started on his road to greatness, and the other because most of the significant structural changes in the building had been made by then.

So instead of taking the modern architectural approach of finding a new solution to a new problem, the architects had to discover old solutions to old problems. They had to become 19th century architects.

They, who proudly called themselves contemporary architects, had to step back more than 100 years and think in terms of jacks and bricks instead of precast concrete beams which span 100 feet.

"We got ourselves so conditioned to thinking in 19th century terms," confessed Ferry, "that we had a hard time breaking out of it to solve problems with modern solutions which could have been solved that way."

It was a combination of immersing themselves into the past century and exhaustive piecemeal research that got them through.

Four of the firm's staff members functioned as the research team. Huge quantities of material ranging from personal letters to advertisements to ledger entries were sorted through.

"It was very much like solving a jigsaw puzzle," Henderson explained. "Each fragment was insignificant by itself but, related to other fragments, could help us piece together the whole fabric of John F. Rague's (the original architect) design."

In 1964, after a year and one-half of research, Ferry and Henderson reported to the state that a reconstruction of the Old Capitol Building was feasible.

Since the building program had been expanded to include the State Historical Library and the underground parking facility, they recommended that what remained of the original building be carefully dismantled and reassembled.

"We thought we'd get fired on the spot," Henderson admitted.

But this solution, which would permit integration of modern utility systems and the preservation of the past, was accepted, and the firm was directed to begin final working drawings for the project.

"The building was like a satellite," project architect August Wisnosky explained. "There was only so much space and so much equipment to be accommodated in the limited confines of the structure."

But it was even worse than a satellite. If this building was going to be truly inspirational, air-conditioning equipment, and electrical lights could hardly show.

So the air-conditioning equipment, electrical apparatus, ventilation, counting systems, burglar alarms, and closed circuit tv equipment had to be hidden.

Great hiding places were found. Some equipment is in the furniture, some in decorative molding, and some in ornamentations. As great as the ideas were, ideally, the visitors won't even think about it. They will hopefully see it as it was—but in a way that is a pleasurable experience.

The same effect will hopefully come out of the inclusion of the library and underground parking. "People shouldn't be overwhelmed with the fact that this is an underground parking facility," Henderson said. "From the first moment they enter the structure, people should not even think that it is an unusual situation."

The hardest obstacle to overcome in this respect was how to take people smoothly from an underground parking facility (usually quite utilitarian) to a historical library (which would hopefully be an inspiring, aesthetically appealing facility).

The answer was a cathedral. Specifically, by using the hyperbolic paraboloids (which are really inverted pyramids) a cathedral-like atmosphere was created in the parking area.

The challenges indeed were there. The answer stands in the middle of the square—successful from the outside—and even more so from the inside.

"It's a living, teaching, experience-filled building."

# Each Stone Removed . . . .

## . . . Like A Precious Gem

When the old State Capitol was being dismantled by the National Wrecking Co. of Chicago in 1966, each stone was taken down carefully as though it was a precious gem, card coded and stored at the Illinois State Fairgrounds until the building was ready for reconstruction.

The coding system for the original stones, devised by the architects for the project, proved to be the most valuable asset in relaying the stones to the building, according to Phil Evans and Wymond Mason, masonry contractors in charge of the reinstallation of the original stones of the building. Mason and Evans were given the job as sub-contractors of the Franklin-Cress Construction Co. of Springfield, who had the general contract for erection of structural work and placement of new stone to the first floor level and relaying the original stone from there on up.

"If the stones had not been coded as expertly as they were, relaying them would have been practically impossible," said Mason. The coding system numbered each stone and told exactly where it came from and where it was to be relaid.

A few problems presented themselves when some of the coding symbols on the stones were obliterated by weather elements at the fairgrounds. But with the help of a huge coding chart and sketches made by the architects of the locations of the stones at the fairgrounds, each stone could be identified before an attempt was made to haul them out of storage.

According to Evans and Mason, several problems arose during their big relay project. Among the most important concerned the cutting of some of the stones from a two foot thickness to a 10 inch thickness since the walls of the building were slimmed down in the reconstruction.

A special cutting mill was set up in an area north of the fairgrounds by William Blottie, president of the Capitol Stone and Material Supply Co., a new firm in Springfield. Blottie, using a special steel wire saw, cut each stone to the desired thickness. At first it was thought the stones could be cut by diamond blade saws. But the stones are loaded with flint making them soft in some places and extremely hard in other places.

The surface stone is soft and crumbles easily, but the center is almost as hard as granite. The diamond blades proved to be too expensive because they wore out quickly, so the special wire saw was deemed more practical.

A coordination problem was probably the most critical. Getting the stones from the fairgrounds to the cutting mill and back to the old Capitol when needed was a tremendous task. It was important not to have workmen idle, but sometimes the right stones just were not at the Capitol at the right time. None of the stones could be substituted for each other since no two were exactly alike. The few stones chipped in transportation or through accidents were actually "glued" back together, because there were no stones to replace them. The right stone had to be put in the right place, and if a particular stone was not at hand, work stopped until it arrived and was laid.

Operating space at the site also was crucial. With the heavy traffic around the square, crane operators found it difficult to maneuver. And, of course, equipment storage space was always limited.

At the same time the stones were going back up, the Evans Construction Company was excavating for the parking garage. This meant that the big old stones, weighing from 900 to 1,200 pounds each had to be swung by a crane over the excavation up to the building. If the first swing wasn't successful, usually the second try got the stone up there.

New stone to replace the original stones destroyed in the "moat" area when the building was raised to add a floor in 1901, came from Mankato, Minn. This was the only place in the United States where stone similar in texture and color to the originals could be found. This new stone was acid treated and dyed to conform with the old stones.

"A unique problem confronting us in this project," said Evans, "was trying to estimate the cost." Since the restoration of an old building had never been done in this area before, the masonry firm had nothing to fall back on in estimating such a job. Eight million pounds of material including bricks were used, but both Evans and Mason agreed that fewer problems occurred than were anticipated.

"Most of the pieces fit just like a puzzle. Finding the right pieces for the right places was not especially difficult thanks to much of the hard work of the architects," Mason commented. They had made a photo of the building blown up to a gigantic size which showed markings where the stones were taken away and where they had to be put back.

"We had problems," said Mason, "but they all were solved without too much trouble and without much delay."





# House Chambers



One of the first pieces of furnishings moved into the reconstructed State Capitol was the speaker's desk in the House Chambers. The floor had been sanded and polished but no

more furniture will be moved in until nearly all the construction work has been completed.



# Every Room Looks Just Like It Did When Lincoln Saw It

A visit to the Old State Capitol is a trip back into time. The rooms—from a basement-level storage apartment to the magnificent House of Representatives—appear just as they did in 1858, the year Lincoln delivered his famous “House Divided” speech.

The interior of the building was restored with some difficulty and much perseverance by Springfield architects Don Ferry and Earl W. Henderson. A fire in the 1930’s destroyed drawings of the building’s interior and few photos were made of it before its turn-of-the-century remodeling. The architects, in conjunction with State Historian Clyde Walton and his staff, were faced with the immense task of assembling all pertinent research materials and, from these, preparing drawings for a historically accurate State Capitol.

The architects and their researchers scanned the hen-scratching of 120-year-old bills. They pored over the elegant longhand of official documents. They examined minute details of reporters’ drawings of the day—the 19th century substitute for news photos. And after years of what Henderson calls “architectural sleuthing,” a room by room description of the historical landmark was composed.

The entrances to the building are on the north and south. Three double doors on each of these sides open into the rotunda area which extends 32 feet from north to south. In the center of this area is a well from the first floor to the top of the inside of the cupola. At the top of this well is a “rose” about six feet in diameter, visible from the first floor.

Two flights of stairs ascend from the north and south to a platform above, 10 feet up, and then branch east and west to the second floor. The upper flight is short—about five or six steps—while the lower flight is two or three times longer.

The rotunda area was a popular gathering place at the Old Capitol, used for social events, revival meetings and public speeches. The speaker stood on the platform and addressed his crowd assembled in the area below and also on the second floor around the railing.

The rooms on either side of the rotunda on the first floor include the state treasurer’s office in the southeast corner. It is an airy room with four tall windows and a 16-foot ceiling. Henderson explained that the Old Capitol’s classical architecture is also “functional architecture.” Planners designed tall windows to allow free circulation of air and entry of light into the rooms. He also commented that most of the specifications called for white paint rather than dark or colored paint. The reason again is a logical one. White paint is reflective and makes the whole room lighter.

Henderson also pointed out architectural tricks with slots in the windows and the molding. Hidden in these areas are air conditioning vents and lights—both incongruous with the rest of the 1858 setting and cleverly installed out of sight.

North of the state treasurer’s office are the Law Library and a clerk’s office, and in the southeast corner of the first floor is the Supreme Court Room. The state auditor’s office is in the southwest corner. North of it is the State Library and the Secretary of State’s office. All of the first floor rooms are architecturally much the same with the tall, shuttered windows and the 16-foot ceilings designed for maximum ventilation in pre-air conditioned days.

On the second floor are the more elaborate and historically significant rooms—the Senate, the governor’s office and the House of Representatives.

The Senate is in the northeast corner. A double door in the west wall opens into this ornate room, 40 by 50 feet in dimension. The speaker stood opposite the door and looked upon the senators, arranged in a semi-circle before him.

Behind the seats of the senators are the tall fluted columns and a balcony for spectators. Twenty feet above is a coffered ceiling with classical molding at the juncture of wall and ceiling.

To the south of the Senate are committee rooms and in the southeast corner is the governor’s office which Lincoln used as his office following his election to the presidency in 1860.

The office is similar to the first floor rooms—high ceilinged and unelaborate. In a book, “Lincoln On The Eve Of ‘61”, the author wrote that this “room of the governor of the state of Illinois cannot be said to indicate the vast territorial extent of that commonwealth.” He described the room as “inadequate for Mr. Lincoln’s visitors” and wrote that “12 would be uncomfortable standing.”

If the governor’s office was described as “inadequate,” a different strain of adjectives must be applied to the impressive House of Representatives occupying the entire west side of the second floor. This stately room resounds with history, echoing above the speaker’s platform where Lincoln delivered the “House Divided” speech and around the lofty classical columns.

The House is a huge rectangle, 82 by 40 feet in dimension with a ceiling 20 feet high. The double doors on the east side are opposite the speaker’s podium on the west. The representatives were, of course, seated facing the speaker.

Behind the representatives’ chairs is an 11-column colonnade in a half-ellipse and a balcony large enough to accommodate about 200 people. Above the speaker at the apex of the half-dome coffered ceiling is a rising sun, radiating to the circumference.

Fortunately for the architects, several sketches and photos of the historically important House were available. Following Lincoln’s election to the presidency in 1860, staff artists of news publications were sent to Springfield to illustrate the Illinois environment of the president.

## “Skilled Artistry”



A skilled workman from the plaster contracting firm of Rhodes & Rodier Co. completes the ornate decoration on a support

column in the Old Capitol. Officials for the plastering firm said copying the elaborate detail required recapturing a lost art. —



# Woodwork And Plaster Made To Match Original

Plastering the columns and ceilings and placing ornaments and decorations in authentic fashion throughout the Old State Capitol was one of the most artistic tasks involved in reconstructing the Lincoln shrine.

Expert plasterers employed by Rhodes and Rodier, the Springfield firm awarded the subcontract for this task, used their own ingenuity to solve the complicated problems involved in recreating the interior of the building as it was built originally.

Rhodes and Rodier were contracted to lath and plaster all interior walls and plant all ornaments and decorations made according to architects' specifications as they appeared during Lincoln's time.

The first step in this project was to find a modeling and casting shop for the ornaments. Rhodes & Rodier gave this work to the Chicago Decorator Supply Co. The Chicago company took the plans designed by the architects, made models of the ornaments, cast them, and sent samples back for the architects' approval.

The most important ornamental items were the capitals (caps) for the Corinthian and Ionic columns inside the building which run fairly true to form dating from ancient Greek times. Books describing these ancient columns, their design, and how to plant them were not difficult to find.

The Corinthian columns with their bell-shaped caps enveloped with acanthus leaves are found in the House of Representatives and the Senate in the Old Capitol. The caps were cast in two sections, planted on top of the columns, and the joints tooled in with plaster by expert workmanship. There is not a trace of where the sections join.

The difficult part in the construction of these columns was not the ornaments, but the flutes, metal rods covered with plaster which run from top to bottom on the columns. The flutes provide for the jointed appearance of the columns. Since the columns are narrower at the top than at the bottom, the flutes had to be made accordingly. They were made by workmen as they were needed.

The flutes were planted one by one on the columns with hair fiber and molding, and joined by plaster. This work was time consuming and it required "artists" to plant and join the flutes to make the columns appear as though they were born classic and beautiful.

The Ionic columns with their spiral scroll-like caps, seen in the first floor State Library and lobby, were fluted and mounted in much the same way as the Corinthian columns. All these columns were hand-made inch by inch by contemporary workmen using ancient ideas.

Before any plastering could be done, the lathers had to install their metal wiremesh type material in all parts of the building requiring plaster. The rotunda presented a big problem. It was difficult to bend the rods in order to get the curved design of the rotunda. The lathing of the rotunda is actually tied by wire to the

rafters of the ceiling of the capitol. When looking at it from the top, the rotunda appears to be suspended. Of course, the lathers had to always keep one jump ahead of the plasterers, which meant solving problems quickly and moving on.

The coffered ceilings of the House and Senate also were a challenge to the plasterers. The ceiling of the House is a three-point ellipse, and the coffers, or recessed panels, had to be so designed to form the elliptical curve, and to match up perfectly with the side walls.

The ceiling of the Senate was even more difficult since half of it is an elliptical curve meeting the other half which is a straight radius ceiling or regular barrel ceiling. Different radii had to be taken for each half of the ceiling and the designs laid out on the floor before work on the ceiling could begin.

The rotunda also has a coffered ceiling which presented the problems of getting the plaster up there, and working in a narrow space. Most of the plaster material was pumped up through hoses and pipes by a special machine.

Another problem arose with the ceiling in the first floor State Library, the Secretary of State's office to the right of the library, and the State Auditor's office to the left. The architects' drawings called for approximately three-inch recessed circles on the cross beams of the ceilings. Since it was difficult for the plasterers to get the exact dimensions from the perfect circles, the lathers' superintendent ordered about 12 dozen cake pans which met the exact specifications, and put these into the holes. Now these cake pans are seen adorning the ceilings. "Some of our most difficult problems are solved by just a little imagination," said Richard Rodier, superintendent of the lathers.

The process used by the plasterers was what is called a "run in place method." Different molds had to be made for each design needed.

The molds, designed and constructed by Rodier experts as each job came up, were made of tin, snipped to the exact design required, and backed by wood. The molds are pushed across the surface (running a mold) and the pattern is etched into soft plaster.

Dentils form much of the ornamental work on the moldings throughout the building. Dentils are small rectangular blocks running in a series and projecting like teeth from the molding. They are found, as are the columns, in Corinthian and Ionic architectural orders.

The dentils did not cause a big problem, except for the fact that many of the air conditioning ducts are concealed between these dentils. Plasterers had to be careful to measure exactly so as not to cover up the ducts.

Air conditioning ducts are also hidden behind many other moldings in the building, and the plasterers had to do an expert job so the ducts would not be seen as well as not covered. Plastering around hidden light fixtures also presented problems at times.

# Furnishings Took Months Of Searching

Warehouses in New Orleans have been searched and antique shops throughout the nation have been visited to assemble the hundreds of authentic items that will be the furnishings of the Old Capitol.

James Hickey of the Illinois Historical Library staff, reports that the furnishings are just about complete. He believes more chairs will be needed and more books to fill the bookshelves in the offices. Spittoons will have to be made, because the authentic article from the mid 19th Century no longer can be found.

However, all of the important items have been purchased and gathered in Springfield warehouses. A Dutch manufacturer has made a chandelier for the Senate Chambers which duplicates the original. A cloth manufacturer has woven the ingrained carpet which will be laid in the chamber of the House of Representatives and the Senate.

Desks and chairs which duplicate those used by the 19th Century legislators have been made by modern cabinetmakers and are awaiting installation.

Hickey estimates there are some 500 authentic antiques to be placed in the building and hundreds of other small items such as lamps, which also were used in Abraham Lincoln's day.

Some \$300,000 was raised by the Abraham Lincoln Association with which to buy furnishings. However, purchases have been made at low enough prices to leave a balance to pay for other things to be done in the Old Capitol. These may include preparation of programs to explain the historic site's significance.

Hickey expects the moving of the furniture and the placing of it to take about two months. The carpet when it is laid must be handsewn. It comes in strips which must be sewed together.

Hickey has been surprised at the ease with which some pieces were discovered. New Orleans warehouses were found to be a gold mine of antique furniture, such as large secretaries. The large furniture used in offices would have only a moderate appeal for persons buying antique furniture for their homes, according to the historian.

Hickey also was surprised by the items which had to be especially made, because they are no longer manufactured. Black stovepipe, familiar to many generations, no longer is manufactured, he said. Modern stovepipe is blue in color and corrugated. An iron manufacturer in Wheeling, W. Va., filled a special order for the needed stovepipe.

Collection of the many items needed to furnish the building also was a matter of luck. Hickey reports he and another member of the library staff found in a New Orleans antique shop a water cooler exactly like the cooler which appears in an 1860 sketch of the governor's reception room.



William Alderfer, State Historian, checks one of the big round clocks to be hung in the legislative chambers.



Lowell Anderson, curator, checks a few furnishing items to be displayed in Old Capitol.





An old style lamp, above, and decorative eagles, below, are checked by Alderfer and Anderson.



# Hyperbolic Paraboloid Design



Construction near completion, hyperbolic paraboloids stand guard in the underground parking ramp of the Old Illinois State Capitol as workmen put finishing touches on the highlight of Illinois' Sesquicentennial Year finery. The ramp will house hundreds of cars employed by tourists and other in-

terested persons in visiting the historic structure, the dedication of which will climax the celebration of the state's 150th birthday. In addition to the parking area, the Old Capitol underground unit will house a historic library.



# New Concept In Parking Garages

Underground parking garages are not by tradition structures of beauty. Usually they are, as architect E. Wallace Henderson has said, "nothing more than grease, oil and automobile."

However, the entire concept of the Old Capitol's reconstruction is far from traditional. And in keeping with this, the 470-car garage is more reminiscent of a cathedral than a covered parking lot.

In fact, the ideas used in this garage may "change the entire concept of underground parking," again quoting Henderson.

The lower of the two levels doesn't do much to arouse one's aesthetic wonder. However, the atmosphere on the upper level is airy and almost church-like.

The credit goes to the hyperbolic paraboloid design of the ceiling.

Although it's a mouthful to pronounce, hyperbolic paraboloids are not difficult to understand.

"Inverted umbrella" is the term used by Jack Casson, consulting engineer with the Walter E. Hanson Co., to describe the ceiling structures. There are 90 such "umbrellas" or hyperbolic paraboloids in the garage roof.

Henderson explained each is a square of concrete 30 feet on a side that appears, when one looks upward in the garage, to have been pulled down in the center by a column. The results are eye-pleasing arches.

It is this arch formation that makes the difference, Casson explained. As in most garages, the second level of the Old Capitol garage is about seven to eight feet high. "You get the feeling of being closed in, even though the space is adequate," he said.

However, the upper level is seven and a half feet high to the base of each arch—the arch itself then rises another five feet or so, Casson explained.

The umbrellas were made from forms designed by Ed Kane, project manager. Four quarter sections were rolled into position, bolted together and jacked up to the proper height. When reinforced concrete dried in the resulting umbrella design, the forms were merely taken apart in quarters and rolled to the next site.

This architectural concept has never before been used in underground construction. Why the bold experiment on this project?

As much as anything else, it was a necessity. According to engineer Casson, there were three major requirements for this garage. It had to be:

- aesthetically pleasing;
- sturdy enough to support dirt and large trees;
- as low cost as possible.

Eye appeal was a primary consideration because entrance to the state historical library is from the upper parking level. Henderson explained the library is not a lending but rather a research library.

Consequently, the architects did not want to design the entrance from the garage in such a manner that it would immediately attract everyone's attention. However, the library is the most important center of written state history. And as such it should have a pleasing exterior.

So "pleasant, but not inviting" was the atmosphere architects sought to create in what is virtually the outer lobby to the library.

Architects thus tried to design the entrance to the library in keeping with the respect due the collection of writings. Meanwhile, outdoor landscaping was creating additional problems.

Photos and sketches of the original Capitol showed

"many, many large, full-sized trees," explained Casson. Full-sized trees need from six to seven feet of soil in which to grow.

Since soil weighs in the vicinity of 120 pounds a cubic foot, the roof of the garage would have had to be two and a half feet thick to support enough soil to grow all the trees.

Also, engineers considered it important to utilize support of a bed of shale some 25 feet below the Capitol itself. With a thinner roof the garage could be two levels and rest on the shale—an excellent base, Casson explained.

But with a ceiling over two feet thick, there would not be enough height for two full levels. This would result in the additional expense of driving supports for the entire structure down farther.

And the thicker, thus also lower, the ceiling, the steeper the entrance and exit ramps would have to be, Casson said.

The solution was almost obvious—a new type of design would have to be used. How did the eventual hyperbolic paraboloids solve the problems? Casson said, "By solving one problem we eliminated others." By virtue of its "inverted umbrella" shape, the parabolas allow for tree planting. The trees will simply grow in the deepest part of the umbrella.

Because the dirt won't have to be six or seven feet deep over the entire ceiling, the ceiling could be made thinner. It is, in fact, only six inches thick. A thinner ceiling, in turn, resulted in enough space for two levels in the garage and softer sloping ramps.

The new design even resulted in lowering costs of the garage. Casson was hesitant to estimate how much was saved by the new design, since as he said, "we didn't even start to figure the cost of a flat roof because we knew it was impractical." Although he also did not speak in specific figures, Henderson estimated "this type of construction saved hundreds of thousands of dollars."

And so the problem of design was solved—almost. Again it was the landscaping that raised a question. How would drainage from the center of the parabolas be provided?

Casson explained that in this situation as much water must be drained as possible since water adds to the weight of the dirt.

The solution was a drain built into the center of each column—into the center of each umbrella, in other words. This iron casting runs through the center of the column to the layer of shale. There it connects with pipes and trenches which drain the parking levels.

This lowest level of pipes runs the drainage to sump pumps located in the corners of the garage. This sump collects drainage from around, under, inside and above the garage and pumps it up to the sewers.

But once these major problems concerned with building the garage were solved, questions about ventilation, heating and lighting were raised.

According to Henderson, ventilation is one of the most important considerations in a garage. This was echoed by Casson, who emphasized the necessity of considering the safety factor because of carbon monoxide present.

Air is collected from the floor and run through ducts which can be controlled by dampers, explained Casson. This air is directed to the corners of the garage where the sump pumps are located and where huge fans will blow the stale air up to the street.

# Recreate Grounds In Style Of The 1860's



"Old State Capitol In 1858"

Visitors to the Old State Capitol area may rightly feel that they have stepped from the present into the 1860's as every effort has been made to recreate the Springfield square as it existed on May 4, 1865—the day Lincoln was buried.

Technical advisor for the landscaping of the grounds was Dave Spencer of Spencer and Spencer Nursery. In the fall of 1966, Spencer began extensive research to determine the layout of the area in Lincoln's day.

His search for pictures, plans and verbal descriptions finally yielded ten, glossy photographs taken on the day of the funeral. Luckily, the photographer shot the scene from many different angles on the ground and from buildings so that an accurate description of the grounds could be determined.

Spencer calls the original plan "old fashioned" but "interesting." Trees and shrubs are planted in a long, striplike fashion and in perfect symmetry in accord with the style of the times.

Many of the types of plants were identified and, with a few exceptions, are the same types used in the restoration. One exception to the historical plan is the substitution of a hybrid variety of Elm for the original American Elm, so susceptible to numerous diseases.

Of the more than 600 plants used to landscape the grounds 45 are shade trees; 17 are flowering trees; 491 shrubs; and 73 are evergreens. In addition, 7500 ground cover plants have been used, and a 6,000 square foot lawn has been planted. After historical accuracy, the main consideration in choosing the plants was hardiness.

Only one departure from the original design has been premeditated, and that is the planting of a good lawn. The original lawn was a ragged affair, cared for only with sickles.

The entire square is surrounded by an outer sidewalk. Inside this is a six-foot high iron fence. A strolling

path of white gravel runs inside the fence, allowing visitors to walk leisurely through the gardens. Running perpendicular to the fence, from the center of each side of the square is a 10-foot white rock carriage path. These entrances lead to a circular carriage path that surrounds the Capitol itself.

The fact that the Old State Capitol grounds are directly above an enormous parking garage makes the project unique. Other gardens have been planted above parking facilities but never with so little dirt fill and in so temperate a climate.

The floor of the garden consists of 30-foot square sections that start at a depth of 5 feet in the center and taper to 18 inches at the edge. This extremely shallow fill makes planting difficult.

One precaution taken by the landscaper was to plant large trees only where the fill is deepest.

The garage roof also presented a drainage problem. Each 30-foot basin is equipped with a drain in the center to carry off excess water. A clogged drain can be corrected from below.

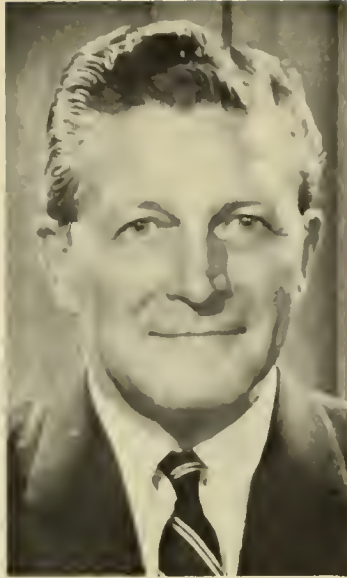
Another unusual problem is presented by the heat that will be generated in the garage. In the course of a winter the temperature may be -10 degrees outside and 50 degrees under ground. How this radical temperature difference will affect the plants no one knows.

The success or failure of the area depends greatly on the maintenance it receives, according to Spencer. The forementioned problems and the fact that the area is in an urban area with car fumes and stale air makes careful maintenance vital.

Spencer has suggested that a permanent crew of two men be assigned to the area. The men will spray, water, trim and feed the plants.

Contractor for the area was Higginbotham Landscape Company, which bid considerably under the \$40,000 estimated cost.





## Otto Kerner Major Force In Restoring Old Capitol

A fellow who lives and works in Chicago had as much to do with the restoration of the Old State Capitol as any person involved in the mammoth project.

His name: Otto Kerner, federal appellate judge with headquarters in his native Chicago.

But for nearly 7½ years, from January 1961 until May of this year, he was governor of Illinois and active citizen of Springfield.

During his tenure in the capital city, Kerner took a vigorous interest in community affairs, and his efforts in many local ventures have won him the respect and admiration of Springfieldians who still consider him one of their own.

The effort he made toward reconstruction of the Old Capitol will probably go down in Illinois history as his finest cultural achievement, for it was he who provided the impetus for the monumental historical project.

Perhaps the thing most genuinely bearing the Kerner mark is the Illinois State Historical Library beneath the Old Capitol. It was his idea to move the library out of its cramped headquarters in the Centennial Building and place it in more spacious quarters under the Old Capitol.

"It was my thought that the Old Capitol would become the historical gem of the state," Kerner says, "so it seemed logical to put our historical library in the same building."

He points out that the present library simply lacks facilities and cannot provide such things as proper humidity control for historical documents, some of them extremely old and in flimsy condition.

"With the new library a part of the Old Capitol, we should attract more tourists — both domestic and foreign — which will result in more study of Lincoln history," Kerner contends. "The top Lincoln scholars from all over the world will in increasing numbers come to Springfield to work, and it should mean the body of knowledge about Lincoln will continue to grow and grow."

Kerner said he first became aware of the state's opportunity to purchase the Old Capitol during his

first campaign for governor in 1960 when the building at the time served as Sangamon County's courthouse.

After he became governor, he at first was hesitant to ask the state legislature to buy the building because of the financial crisis facing Illinois in 1961.

"But the county was talking about either selling the building and building a new county courthouse, or tearing it down and building in the same place," Kerner recalls. "I realized if we didn't act we might lose the second most historical building west of the Alleghenies."

So, at Kerner's urging, and with the help of the late Sen. George Drach, R-Springfield, and others, the General Assembly appropriated nearly a million dollars to buy the building and property from the county.

Early in his first administration, Kerner went to work to reactivate the almost defunct Abraham Lincoln Association. After it was rejuvenated, the association assumed the task of raising funds to help pay for the project, which was eventually to become a \$6 million enterprise.

Earl W. (Wally) Henderson was hired by the state to serve as architect for the reconstruction program, and he began immediately an exhaustive study of old documents to determine the exact nature of the building as it appeared 100 years ago.

"Wally certainly did an outstanding job," Kerner comments. "It was a tough assignment and he had to search hard in order to find many of the documents which described the appearance and contents of the original building."

Kerner is also proud that he favored building an underground garage, with the Illinois Building Authority having the responsibility for issuing revenue bonds to pay for the garage's construction.

"The important thing here," Kerner emphasizes, "is that taxes won't be used to pay for the building's maintenance. Money collected from the use of the garage should take care of that."

Otto Kerner, because of his efforts in behalf of the Old Capitol restoration project, will be remembered as the governor whose administration provided the nation with one of its most treasured historical sites.



## He Got Involved— And Loved It

Most things don't just happen; people make them happen.

Some people have money, which gets things done. Others have ideas. Still others have energy. Then there is another class — those people have the ability to motivate others to do good work and then coordinate these forces.

Clyde Walton, former state historian, is in that latter class. But he's also got the ideas and energy.

The Lincoln Home District wasn't suddenly zoned historical, nor did the Old State Capitol suddenly go down and up again in magnificent style. Someone motivated and coordinated the people who got it done.

Hundreds of people can look at that Old Capitol and be proud. There's Gov. Otto Kerner, the architects, the legislature who approved the expenditure, the news people who backed it editorially and scores more.

Clyde Walton is now in DeKalb. He is director of libraries at Northern Illinois University but if DeKalb will share him, and even if they won't, it's safe to say that he hasn't entirely left Springfield.

As he talked about the Old Capitol project in a downtown Springfield restaurant, Walton would start talking about current problems in connection with it — then would interrupt himself and abruptly state that that was someone else's problem now. It happened more than once.

But he's still wrestling with Old Capitol problems even in DeKalb, no matter what he says, and Springfield newspapers still go to his home.

In the humblest way he stated that he gave his life to that building. "It was the hardest thing I ever did in my life . . . it's cemented with my blood," he said.

Then, he added, almost wistfully, "But I feel better every time I look at it."

He admitted that he never intended to get so involved. Maybe some things do "just happen."

Specifically what did he do? His actions are hard ones to measure. He suggested what turned up to be one of the architectural dilemma keys — that the Iowa Territorial Capitol Building be investigated for its similarities to the Illinois Capitol. It turned out that Rague's (the architect for the Old Capitol) plans were used for the Iowa building also.

He was in on the revitalization of the Abraham Lincoln Association, the inclusion of the historical library and the special electronic equipment, in addition to a great deal of the research work.

Why he did it is the hardest to explain.

One of the reasons would be history and another — Springfield.

Historically, he said, "It should have been done . . . it should have been done a long time ago."

The restoration of the Old Capitol, to Walton, was a "very tangible example of the city getting involved in a forward-looking activity" . . . and he loved it. He pensively recalled an article that appeared in a national magazine on Springfield in the mid 1940's, and then pointed out the huge strides the city had taken since then.

"We aren't just restoring an old building—that's meaningless," he said. "I hate an old building that does not teach — emotionally and intellectually," he said.

Walton's conversation was filled with credits. He wanted to give credit to everyone who was involved — but always stopped himself for fear that he'd forget somebody.

Springfield has benefited immeasurably from Clyde Walton — who was here nine years. DeKalb will too, although he admits that he hasn't got started there yet. "It takes a couple of years to put your house in order," he explained.

He's got dreams though, and when they're realities, there will be more dreams.



(Continued from Page One)

" 'A house divided against itself cannot stand.' I believe this government cannot endure permanently half slave and half free. I do not expect the Union to be dissolved — I do not expect the house to fall — but I do expect it will cease to be divided."

Lincoln lost the race for the Senate, but in 1860 he was nominated and elected President. Realizing that his dusty law office was no fit place to receive visitors, the president-elect accepted an offer from the governor to use his office located at the southwest corner on the second floor of the Capitol. There Lincoln received well wishers, office seekers, political leaders and reporters during the turbulent days before the Civil War.

The last time Lincoln was in the Capitol was in May 1865. The body of the martyred president lay on a catafalque erected on the speaker's rostrum in the Hall of Representatives. An estimated 75,000 mourners filed by in a constant stream from 9 p.m. on May 3 until 10 a.m. May 4 when Lincoln's body was removed to the sound of minute guns and a 250-voice choir.

Stephen Douglas, Lincoln's perennial opponent, also endowed the Old Capitol with some of its most historic moments. He was elected to the U.S. Senate three times by state legislatures meeting there. The Little Giant, known for his small stature and prodigious intellect, was only 34 years old the first time.

After his defeat in 1860 and the start of the Civil War, Douglas was asked by Lincoln to rally Illinois to the side of the Union. On April 25, 1861 Douglas delivered perhaps his finest speech before a joint session of the Illinois legislature in the Springfield Statehouse. History records that Douglas' "Save The Union" plea was met with tremendous applause.

The salvation of that shaky Union was to lie to a great extent in the hands of a young colonel of the 21st Illinois Regiment — Ulysses S. Grant.

Grant had gone to the Capitol in Springfield after the outbreak of the War to plead for a small commission and active duty in the Union army. At first he was ignored and assigned to work as a clerk in the Illinois adjutant general's office, but finally the command of the rebellious 21st Illinois volunteers was offered.

Grant received his commission in the statehouse and, after spending two months laying plans, emerged from the south door of the building to take charge of his troops, march them to Meredosia and embark them for the South.

Within eight years the statehouse clerk became President.

Other Civil War generals had served in the Illinois legislature while it was meeting in the Old Capitol. Among them were John A. Logan, Richard Oglesby and John McClernand.

The Old State Capitol also sent men to the nation's service following the Civil War.

John Hay, who acted as secretary to Lincoln during the statehouse-run 1860 campaign, later became secretary of state under Presidents McKinley and Theodore Roosevelt. Hay's diplomatic achievements include the Panama Canal agreement and the "open door" policy in China.

Newton Bateman, organizer of the public school system of Illinois, began his career in the Capitol as superintendent of public instruction. Bateman's seven biennial reports have been translated into five languages.

Other distinguished legislators whose careers centered on the Springfield Statehouse include Sidney Breese, Layman Trumbull, William A. Richardson and John Logan.

Illinois governors who served in the Capitol were: Thomas Carlin, Thomas Ford, Augustus C. French, Joel A. Matteson, William Bissell, John Wood, Richard Yates, Richard J. Oglesby, John Palmer and John L. Beveridge.

The history of the Old State Capitol involves events as well as men.

Three Constitutional Conventions were held—in 1848, 1862 and 1870. The great preamble to the constitution, written by Judge Samuel Lockwood in 1847, was adopted and rewritten into the document in Springfield in 1870.

That Constitution begins with Lockwood's words: "We, the people of the State of Illinois—grateful to Almighty God for the civil, political and religious liberty which he hath so long permitted us to enjoy, and looking to Him for a blessing upon our endeavors to secure and transmit the same unimpaired to succeeding generations . . . do ordain and establish this constitution for the State of Illinois."

Lockwood's words which speak of a "civil, political and religious liberty" looked in the 1800's to the Old State Capitol for fulfillment. Today that Capitol and its history is a pledge to us as well.





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